

REMARKS

Claims 2 - 7 and 9 - 13 are pending and under consideration in the above-identified application.

In the Office Action, Claims 2 - 7 and 9 - 13 were rejected.

In this Amendment, Claims 2, 4 - 6, 9, 10, 12, and 13 are amended. No new matter has been introduced as a result of this amendment.

Accordingly, Claims 2 - 7 and 9 - 13 remain at issue.

I. 35 U.S.C. § 102 Anticipation Rejection of Claims

Claims 2-4 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ting et al. ("Ting") (U.S. Patent No. 6,077,412).

Claim 2 is directed to a semiconductor manufacturing apparatus, which comprises an electrolytic plating chamber, an electrolytic polishing chamber, and a conveying chamber having installed therein a conveying instrument responsible for loading/unloading of the substrate to or from the electrolytic plating chamber and to or from the electrolytic polishing chamber, and being connected respectively to the electrolytic plating chamber and the electrolytic polishing chamber. The electrolytic plating chamber comprises a holder for holding the substrate, a cup provided so as to oppose to the holder and is capable of forming a closed space, into which an electrolytic plating solution can be filled, together with the substrate held by the holder, and a nozzle *provided outside of the cup* for supplying a process liquid onto a surface of the substrate held by the holder.

Referring to Applicants' Figures 2 as an illustrative example, Applicants' claimed invention comprises an electrolytic plating chamber 11 having a installed therein a holder 12 for holding a substrate 91, a cup 13 at a position opposed to the holder 12. The cup 13 is capable of forming a closed space together with the substrate 91. The chamber also has a nozzle 14 provided outside the cup 13 for supplying a

process liquid to the surface of the substrate 91 when the holder 12 is not elevated towards the cup 13.

This is clearly unlike Ting, which fails to disclose or suggest the substrate held by the holder, and a nozzle provided outside of the cup for supplying a process liquid onto a surface of the substrate held by the holder. In fact, as the Examiner correctly pointed out Ting discloses a passage (nozzle) 36 provided inside the containment region (cup) 28 so to allow one or more fluids to be piped into the containment region 28 of the sleeve 12. The opening at the end of the passage 36 is located proximal to the surface of the anode 14 facing the wafer, so that the fluid is introduced into the bounded containment region 28 below the anode 14. This injection location of the processing fluid into the sleeve 12 ensures a presence of fresh processing fluid proximal to the wafer surface. (See column 7, lines 15 – 26).

Thus, Ting fails to a nozzle provided outside of said cup for supplying a process liquid onto a surface of the substrate held by the holder. For at least this reason, Ting fails to teach or suggest all of the limitations of Claim 2.

Accordingly, Claim 2 is patentable over Ting, as is dependent Claim 3 for at least the same reasons.

Claim 4 has been amended in a similar fashion to Claim 2. Claim 4 recites the same distinguishable limitations as those of Claim 2. Thus, Claim 4 is also patentable over Ting, as is dependent Claim 5 for at least the same reasons.

II. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ting et al. Claims 6, 7 and 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ting et al. in view of Maydan et al.

Claim 6 is directed to a semiconductor manufacturing apparatus, which comprises an electrolytic plating chamber, an electrolytic polishing chamber, an electroless plating chamber, an annealing chamber, and a conveying chamber.

Amended Claim 6 recites the same distinguishable limitation related to the nozzle and the cup as do Claims 2 and 4.

Maydan also does not teach or suggest a nozzle provide outside a cup for supplying the process liquid onto a surface of the substrate held by the holder. Therefore, Ting and Maydan may not be properly combined to reject Claim 6.

Thus, Claim 6 is patentable over Ting in view of Maydan, as are dependent Claims 7, and 9 – 13 for at least the same reasons.

Accordingly, Applicants respectfully request that these claim rejections be withdrawn.

III. Conclusion

In view of the foregoing, Applicant submits that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

Dated:

March 19, 2007

By:

David R. Metzger

David R. Metzger
Registration No. 32,919
SONNENSCHNEIN NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(312) 876-8000